DETAILED ACTION

Response to Amendment

This office action is in response to the amendment filed 1/11/11. Claims 1-4 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balazs in view of applicant's admitted prior art (AAPA)

4. Regarding claims 1-3, Balazs shows a shaft (longitudinal body) having a driver (end portion 1 can be considered a paddle) capable of actuating a lock, the driver formed integrally on the shaft, wherein the shaft is made of flexible material and, from two diametrically opposed sides, at least one pair of notches (figure 2a at 12a/b)

recessed in the shaft; wherein each notch has two facing flank surfaces (outer edges of notches) and a remainder of the cross-section of the shaft is present between a base of the notches of each notch pair (see figure 2a); wherein a plurality of notch pairs are provided so as to extend transversely to the axis and so that only one of the notch pairs is in an axial section of the shaft (the notches are spaced similarly in the cross section taken at 2a to the applicant's figure 3) and so that the flank surfaces extend in a radial plane relative to the axis; wherein successive notch pairs are separated by intermediate axial pieces (portions laterally between spaces 12) of the shaft, the intermediate axial pieces having full cross-section that extends across an entire diameter of the shaft without profiling; wherein a radial section through the shaft in a region of a notch pair has a remainder cross-section formed by a diametric web (longitudinal portions between 12a/b in figure 2a) having a flat profile and a web length that extends across the entire diameter of the shaft; whereby differing radial sections are arranged in alternating succession along the shaft axis, the sections including a full shaft cross-section without profiling in a region of one of the intermediate axial pieces of the shaft and a profiled remainder section formed by the diametric web in a region of one of the notch pairs; wherein the webs produce flex points when a bending load is exerted on the shaft, so that, at the flex points, the two flank surfaces of the notches move toward each other on an inner side of the shaft bend away from each other on an outer side of the bend; and wherein rotation of the shaft transmits torque only via the diametric webs to the intermediate axial pieces of the shaft that have a full cross-section. Although Balazs shows a shaft that can be used to transmit torque, it is not shown in use with a lock in a

door of a motor vehicle having an overload element. AAPA shows that this is a well known use for a flexible shaft. It would have been obvious to use the shaft of Balazs on a lock cylinder for a vehicle since the prior art and AAPA state that it is well known and common place to have a lock connected via a shaft to a lock cylinder so replacing one shaft with a functional equivalent (a different shaft) is within the skill of a worker in the art. Further, it is well known in the art to include an overload element to avoid damage to the lock. Please see Katagiri showing an overload element. Katagiri is used solely as support that this type of element is common place in vehicle door locks and is standard in the industry.

1. Claim4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balazs and AAPA as applied above and further in view of Adair (US 5325845).

5. Regarding claim 4, Balazs and AAPA show applicant's basic inventive concept but do not specifically show the webs perpendicular to each other. Please note that Balazs shows that it is known that numerous arrangements of notched pairs are known in the art which can include an arrangement having perpendicular webs. Adair shows this type of arrangement on a shaft. See figure 8 where web portions 26 are perpendicular down the shaft. It would have been obvious to one of ordinary skill in the art to arrange the notched pairs of Balazs in the order shown by Adair as Balazs shows that any arrangement including notched pairs will function to bend the shaft at the flex points. The arrangement of notched pairs as shown by Balazs is considered a design choice and can be arranged in numerous variations as shown by Balazs.

Response to Arguments

1. Applicant's submitted translation of the priority documents is accepted. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTINA R. FULTON whose telephone number is (571)272-7376. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Beach can be reached on 571-272-6988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KRISTINA R FULTON/
Examiner, Art Unit 3674
4/8/11